

April 27, 2016  
Revision 3, July 19, 2016



Miller-Valentine Residential Development LLC and  
Davidson Depot LLC  
9349 Waterstone Boulevard  
Cincinnati, Ohio 45249

Attn: Mr. Charles Rulick, MRED, LEED AP  
Vice President  
P: [980] 613-8109  
charles.rulick@mvg.com

Re: Proposal for Environmental Consulting Services  
Davidson Depot (Metrolina Warehouse Brownfields Site)  
301 Depot Street  
Davidson, North Carolina  
Terracon Proposal No. P71167233A

Dear Mr. Rulick:

Terracon Consultants, Inc. (Terracon) is pleased to submit this proposal to perform environmental consulting services at the above-referenced Davidson Depot property (also known as Metrolina Warehouse Brownfields Site) in Davidson, North Carolina. It is our understanding that Miller-Valentine Residential Development LLC and Davidson Depot LLC are requesting a proposal to conduct certain initial requirements for the North Carolina Brownfields Program (NCBP) that are necessary to proceed with the development of the site and continue the Brownfields process.

#### **A. PROJECT INFORMATION**

The project site is located west of Main Street in Davidson, North Carolina, bound by Depot Street, Sloan Street, and Eden Street. The site, which is occupied by two buildings, was formerly used as an asbestos warehousing and sales facility that is currently used as a furniture warehouse and cross-fit exercise facility.

Based on information provided in a Phase I Environmental Site Assessment (ESA) completed by LawGibb Group [LAW] (Project No. 6228-07-4436, report dated December 20, 2007), a Report of Environmental Services completed by Law (Project No. 30100-1-1046, report dated February 14, 2002) and site observations by Terracon, a 12,000-gallon underground fuel oil storage tank (UST) is located near the southeastern corner of the warehouse building and the property boundary (LAW identified the tank location during a magnetometer survey). Although LAW considered the tank as an off-site concern, the tank reportedly may have supplied fuel to an on-site boiler system prior to 1949. According to the ESA, Haz-Mat removed approximately 12,700 gallons of product and water from the tank in



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Geotechnical



Environmental



Construction Materials



Facilities

April 2002 leaving about three inches of residual fluids and sludge in the tank after the removal activities. Analytical results of soil samples collected by LAW near the tank did not indicate a release from the tank. The approximate location of the UST is shown on **Figure 1**.

## **B. ASSESSMENT ACTIVITIES**

Terracon has been requested by Miller-Valentine Residential Development LLC and Davidson Depot LLC to provide a scope of services for assessing the on-site tank for potential impacts to the surrounding soils. Additionally, the North Carolina Brownfields Program requested the collection of soil samples near the loading dock area in the northeastern portion of the site, groundwater samples to establish depth to groundwater and flow direction, and collection of soil vapor samples.

Terracon project personnel will provide the client with routine project updates and will direct field activities regarding site activities after obtaining proper authorization to proceed. Based on our understanding of this project, Terracon proposes to perform the following scope of services.

### **Task 1: Pre-Task Planning and Utility Locating**

Terracon has a 100% commitment to the safety of all its employees. As such, and in accordance with our *Incident and Injury Free*® safety culture, Terracon will develop a safety plan to be used by our personnel during field services. Prior to commencement of on-site activities, Terracon will hold a meeting to review health and safety needs for this specific project. At this time, we anticipate performing fieldwork in a USEPA Level D work uniform consisting of hard hats, safety glasses, protective gloves, and steel-toed boots. It may become necessary to upgrade this level of protection, at additional cost, while sampling activities are being conducted in the event that petroleum constituents are encountered in soils or groundwater that present an increased risk for personal exposure.

Prior to drilling activities, Terracon will contact NC-One Call, a public utility locating company, to locate on-site underground utilities. In addition, Terracon will engage a private utility locator to identify underground utilities that could be present at the proposed boring locations. The private utility locator will also identify underground utilities at the locations of the five soil vapor borings (discussed below) and use ground penetrating radar (GPR) to locate the underground storage tank.

### **Task 2: Soil Assessment Activities**

Terracon will advance one soil boring at each end of the UST (SB-04 and SB-06), one boring near the center of the tank (SB-05) and one boring along the supply line (SB-03) based on the reported distance of the tank to the building (estimated 10 feet) for a total of four (4) soil borings. The soil borings adjacent to the tank will be extended to a depth of up

to ±15 feet below ground surface (bgs) while the boring near the supply line will be advanced to a depth of about 5 feet bgs,

Soil samples will be obtained from the borings utilizing Geoprobe® or a similar direct-push drilling technology and Macro-Core® samplers. Soil type, relative moisture content, and other lithologic characteristics will be documented on field boring logs. Soil samples will be placed into dedicated, re-sealable plastic bags and screened for organic vapors using a photo-ionization detector (PID). The PID results and our observations will be used to select sample intervals from the borings for laboratory analysis. If the PID readings do not indicate a release, the samples will be obtained from the bottom depth of the borings.

Two additional soil borings (SB-01 and SB-02) will be advanced to 15 feet bgs in the paved area between the loading dock (located offsite) and the on-site building. One soil sample will be collected from each of the two borings if PID readings exceed 5 ppm. If PID readings are below 5 ppm, a soil sample will not be collected from these two borings.

*During assessment and drilling activities, an asbestos competent person will be on the site to monitor the presence of asbestos-containing materials (ACM) in the soils. At a minimum, employees and subcontractors performing soil sampling activities will have asbestos awareness training sufficient for Class IV Asbestos Work Activities under the OSHA Construction Standard, 29 CFR 1926.1101.*

The soil samples obtained near the UST and potentially near the loading dock will be placed in laboratory-prepared glass containers, labeled with pertinent sample information and stored in an ice-packed cooler pending submittal to a North Carolina certified laboratory for analysis of volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270 and the eight RCRA metals by EPA Method 6010 in accordance with requirements by the North Carolina Brownfields Program. Terracon anticipates up to six samples will be collected at the site. Chain of custody documentation will accompany the samples to the laboratory.

### **Task 3: UST and Loading Dock Assessment Report**

Upon completion of UST and loading dock assessment activities and receipt of the laboratory analytical results, a report will be prepared that will include the following items:

- Documentation of field activities;
- Site plan showing pertinent site features;
- Soil boring logs;
- Analytical laboratory results;
- Data evaluation and presentation of findings including comparison of soil data to applicable regulatory standards; and,
- Recommendations concerning further action, if necessary

The report will be completed in a format suitable for submittal to the North Carolina Brownfields Program. Work associated with this scope of services will be performed under the direction of a Licensed Geologist registered in the State of North Carolina.

#### **Task 4: Groundwater Sample Collection**

Three soil borings will be advanced to the water table (GW-01 through GW-03) using a direct push technology (DPT) drilling rig. Prior to advancing each boring, the drill tooling will be cleaned to prevent cross-contamination of samples. Proposed boring locations are shown on **Figure 1**. Collection of grab groundwater samples will be attempted at the locations of borings GW-01, GW-02 and GW-03. The sample/screen interval will be selected based on observations of recovered soil but generally, groundwater samples will be collected at the water table. The samples will be collected through 1-inch diameter PVC well screen and riser that will be removed upon sample collection. If depth to groundwater permits, a peristaltic pump will be used for sample collection. Installation of temporary monitoring wells is not foreseen unless the formation does not produce sufficient water for sample collection within a reasonable amount of time. A survey transit will be utilized to obtain relative top of casing elevations at each groundwater sample location as required for the calculation of the groundwater flow direction and gradient.

The samples will be submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method 8260 and semi-volatile organic compounds (SVOCs) by EPA Method 8270, and RCRA metals. Groundwater samples will be collected and placed in laboratory provided containers, labeled, and placed on ice in a cooler which will be secured with a custody seal. The samples and completed chain-of-custody forms will be transported to Pace Analytical in Huntersville, NC, a North Carolina certified analytical laboratory, on a standard analytical schedule. Duplicate samples, field/equipment blank or other QA/QC samples are not included as part of this investigation.

The results of the groundwater sampling activities at the site will be included in the soil assessment report for the UST and the loading dock.

Based on follow-up discussions with the current property owner, no water supply wells are located on the property.

#### **Task 5: Soil Vapor Investigation**

##### RATIONALE AND OBJECTIVE

The soil vapor (SV) investigation is designed to evaluate potential vapor intrusion concerns and potential subsurface impacts from historical on-site or off-site conditions. As required by the NC Brownfields Program, this investigation will assess the potential for vapor intrusion impacts to the future development of the site. Specifically, the proposed investigation is focused on the area near the former asbestos manufacturing building and locations of future

building foundations (**Figure 1**). Five shallow SV samples are proposed at the site mostly within the proposed building footprint.

#### INSTALLATION AND SAMPLING METHODOLOGY

Technical approaches and methods outlined in this soil vapor investigation proposal are in general accordance with the Interstate Technical and Regulatory Council's *Vapor Intrusion: A Practical Guideline* (2007) and *Vapor Intrusion Pathway: Investigative Approaches for Typical Scenarios* (2007), as well as the North Carolina Division of Waste Management (DWM) *Vapor Intrusion Guidance* (2014).

Terracon will advance the soil borings utilizing a Geoprobe® or a similar direct-push drilling technology at the five proposed SV sample locations (**Figure 1**). Borings for the SV points will be advanced to depths of about 15 feet bgs or refusal whichever is shallower. No SV points will be installed shallower than 5 feet bgs to avoid drawing ambient air into the SV screen (short-circuiting). Groundwater is not anticipated to be present in the five borings.

*During soil vapor investigation drilling activities, an asbestos competent person will be on the site to monitor the presence of asbestos containing-materials (ACM) in the soils. At a minimum, employees and subcontractors performing soil sampling activities will have asbestos awareness training sufficient for Class IV Asbestos Work Activities under the OSHA Construction Standard, 29 CFR 1926.1101.*

Unsaturated zone soils will be screened utilizing a photo-ionization detector (PID). A soil sample will only be collected from each boring that exhibits PID readings greater than 10 parts per million (ppm) or if staining or odors are apparent. The samples will be submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method 8260. Soil samples, if collected, will be placed in laboratory provided containers, labeled, and placed on ice in a cooler which will be secured with a custody seal. The samples and completed chain-of-custody forms will be transported to a North Carolina certified analytical laboratory on a standard analytical schedule.

A new, 6 inch long stainless steel wire mesh soil gas screen attached to Teflon tubing will be inserted into the boring and the annular space between the implant and the boring will be backfilled with well filter pack sand to 0.5 feet above the top of the screen. Hydrated bentonite grout will be used to fill the remainder of the borehole to ground surface.

In order to test the integrity of the vapor sampling point seal, both a shut-in test and a helium tracer test will be conducted at each sample point. In addition to the tracer test performed in the field, one sample will be analyzed for helium by the analytical laboratory. One duplicate soil gas sample will be collected to assess laboratory method precision. The interior volume of each sample point will be purged to ensure the conditions inside the sample point reflect soil vapor conditions. After purging, each soil vapor sample will be collected in a laboratory

supplied, pre-cleaned Summa canister with a flow controller set for 5 minutes. The vacuum pressure of the sample canister will be monitored and recorded at regular intervals throughout the sampling period.

An outdoor air sample (OA-01) will also be collected concurrently with the soil vapor samples to assess the presence of VOCs in ambient air. The outdoor air sample will be collected upwind of the soil gas sample points and the sample intake will be located approximately 5 feet above ground surface. The ambient air sample will also be collected in a laboratory supplied Summa canister through a section of tubing attached to a flow controller set for 4-6 hours.

Following completion of the field activities, the Summa canisters (7 canisters/samples), along with chain-of-custody documentation, will be shipped to Eurofins AirToxics, Inc. in Folsom, California for laboratory analysis of volatile organic compounds (VOCs) by EPA Method TO-15, TO-15 Low Level, and ASTM-1946 (helium). The complete analyte list will be reported for each respective analytical method.

#### **Task 6: Preparation of the Soil Vapor Investigation Report**

Upon completion of soil vapor investigation activities and receipt of the analytical results, a written report will be prepared that will include the following items:

- Documentation of field activities;
- Site plan showing pertinent site features;
- Sampling point construction diagrams/locations;
- Analytical laboratory results;
- Data evaluation and presentation of findings; and,
- Recommendations concerning further action, if necessary.

#### **Task 7: Brownfields Receptor Survey**

Per a request by Ms. Carolyn Minnich of the NC Brownfields Program, the existing receptor survey for the site is outdated and needs to be updated. Terracon will update the receptor survey by performing a walking tour and windshield survey of the site areas and reviewing necessary information to complete the receptor survey.

#### **Task 8: Environmental Management Plan (EMP)**

Terracon will prepare an Environmental Management Plan (EMP) for the Davidson Depot site in accordance with North Carolina Brownfields Program (NCBP) requirements. The purpose of the EMP is to safely manage impacted soils (including asbestos impacted soils) and groundwater (if necessary) during site redevelopment. The EMP will describe the type and locations of contaminants of concern (COCs), environmental risks at the site, and will provide instructions for handling contaminated materials that could be encountered during



redevelopment activities. A draft version of the EMP will be submitted to the NCBP for approval.

### **Schedule**

Terracon is prepared to commence work on this project following receipt of written notification to proceed. It is anticipated that on-site field activities will be completed within two to three business days; however, our schedule will be dependent on site conditions, and the field activities of our subcontractor.

Terracon's services will be performed in a manner consistent with generally accepted practices of the professional undertaken in similar studies in the same geographic area during the same time period. Terracon makes no warranties, expressed or implied, regarding its services, findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These assessment services will be performed in accordance with the scope of work agreed by you, our client, as set forth in this proposal and are not intended to be in strict conformance with the previously discussed guidance documents.

Findings, conclusions and recommendations resulting from these services will be based upon information derived from on-site activities and other services performed in accordance with this scope of work. Such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, undetectable or not present during the performance of these services; thus, we cannot represent that the site is free of hazardous or toxic substances, petroleum products, or other latent conditions beyond those identified during this assessment. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings and our recommendations are based solely upon data obtained at the time and within the scope of these services.

### **C. COMPENSATION**

Terracon's fees are included in a separate document.

## **Proposal for Environmental Consulting Services**

Davidson Depot ■ Davidson, NC

April 27, 2016 (Rev. 3 – July 19, 2016) ■ Terracon Proposal No. P71167233A



### **Reliance**

The assessment reports will be prepared for the exclusive use and reliance of Miller-Valentine Residential Development LLC and Davidson Depot LLC and the North Carolina Brownfields Program. Reliance by any other party is prohibited without the written authorization of Miller-Valentine Residential Development LLC and Davidson Depot LLC and Terracon.

If the client is aware of additional parties that will require reliance on the report or specifications, the names, addresses and relationship of these parties should be provided for Terracon approval prior to the time of authorization to proceed. Terracon will grant reliance on the report and specifications to those approved parties upon receipt of a fully executed Reliance Agreement (available upon request). If, in the future, the client and Terracon consent to reliance on the report and specifications by a third party, Terracon will grant reliance upon receipt of a fully executed Reliance Agreement and receipt of an additional fee of \$250.00 per relying party.

Reliance on the reports by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the Agreement for Services authorized in our Proposal No. P71150239, dated June 17, 2015 (and sections of this proposal incorporated herein), the Reliance Agreement and the report.

### **Closing**

If conditions are encountered at the site, which require significant changes in the scope of services or a significant increase in the anticipated number of hours or samples which will increase the cost of the services, you will be contacted for discussion and approval of such changes before we proceed.

If this scope of services meets with your approval, work may be initiated by signing below and returning an original copy of Proposal P71167233A to our Charlotte, North Carolina office. Project initiation may be expedited by faxing a copy of this signed proposal to Terracon at (704) 509-1888.

The terms, conditions and limitations stated in the previously authorized Agreement for Services attached to Proposal No. P71150239, dated June 17, 2015 (and sections of this proposal incorporated herein), shall constitute the exclusive terms and conditions and services to be performed for this project. This proposal is valid only if authorized within sixty (60) days from the proposal date.



**Proposal for Environmental Consulting Services**

Davidson Depot ■ Davidson, NC

April 27, 2016 (Rev. 3 – July 19, 2016) ■ Terracon Proposal No. P71167233A

**Terracon**

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If you have any questions or comments regarding this proposal or require additional services, please contact us at (704) 509-1777.

Sincerely,

**TERRACON CONSULTANTS, INC.**



Carlo Zanon

Project Geologist



Christopher L. Corbitt, P.G.

Senior Geologist



Michael W. Schrum, P.E.

Vice President

Regional Manager

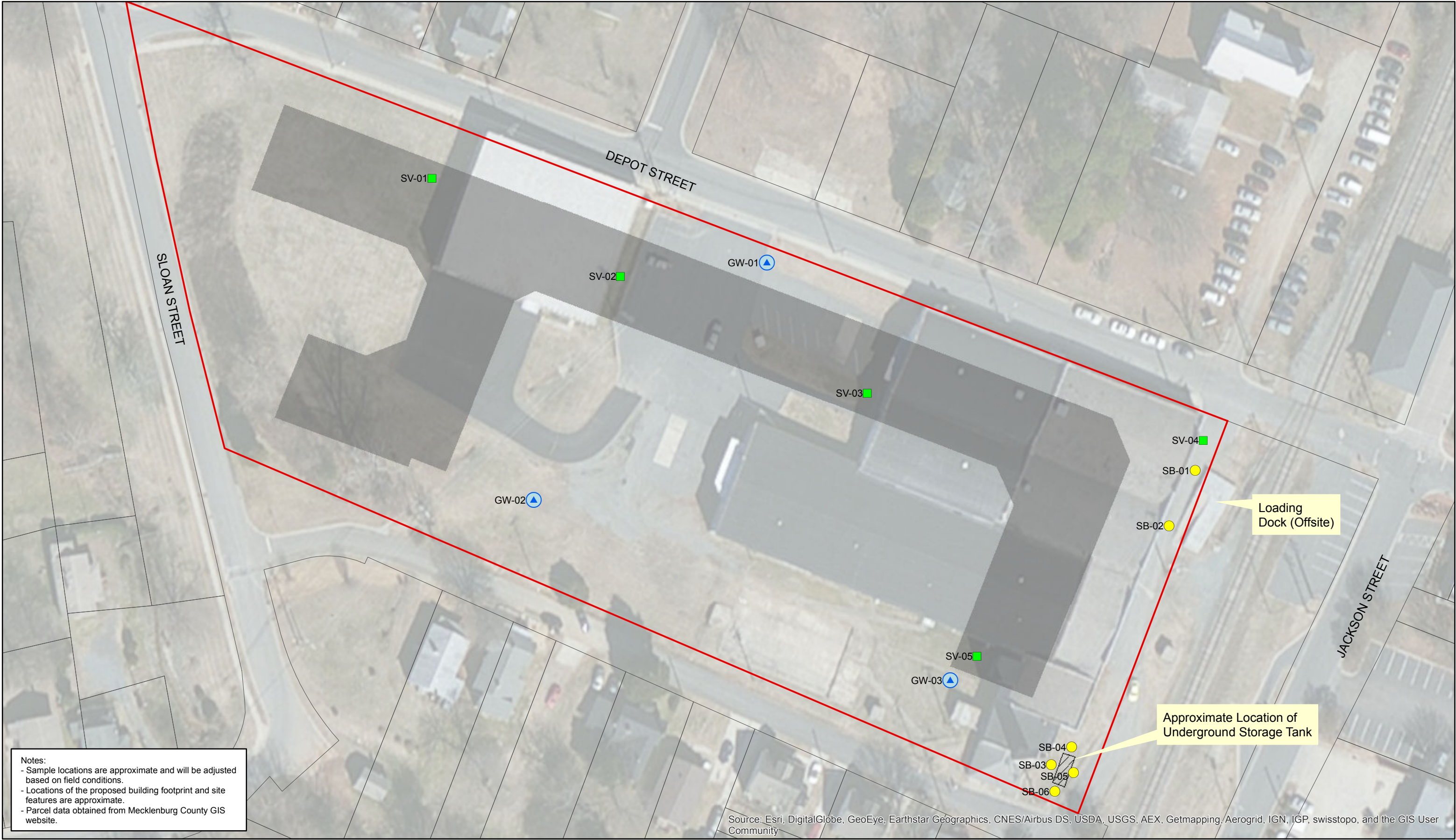
Attachments: Figure 1 – Site Layout and Proposed Sample Location Map

Accepted this \_\_\_\_\_ day of \_\_\_\_\_, 2016

Miller-Valentine Residential Development LLC and Davidson Depot LLC

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name



Notes:  
- Sample locations are approximate and will be adjusted based on field conditions.  
- Locations of the proposed building footprint and site features are approximate.  
- Parcel data obtained from Mecklenburg County GIS website.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

<b>Legend</b> <div><div>Site Parcel</div><div>Parcel Boundaries</div><div>Approximate Proposed Building Footprint</div><div>Approximate Location of Underground Storage Tank</div><div>Proposed Groundwater Sample Location</div><div>Proposed Soil Boring Location</div><div>Proposed Soil Vapor Sample Location</div></div>	<div>1 inch = 60 feet</div> <div>0 30 60 120 Feet</div> <div>N</div>	<div>Project No.: -</div> <div>Drawn By: CZ</div> <div>Checked By: CLC</div> <div>Date: 07/18/2016</div>	<div><b>Terracon</b></div> <div>Consulting Engineers &amp; Scientists</div> <div>2020 STARITA RD, SUITE E CHARLOTTE, NC</div> <div>PH. (704) 509-1777 terracon.com</div>	<div><b>SITE LAYOUT AND PROPOSED SAMPLE LOCATION MAP</b></div> <div>DAVIDSON DEPOT METROLINA WAREHOUSE BROWNFIELDS 301 DEPOT STREET DAVIDSON, NC</div>	<div>FIGURE</div> <div>1</div>
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